VOLTAGE-CONTROLLED DELAY CIRCUIT USING SECOND-ORDER PHASE INTERPOLATION

Abstract of the Disclosure

Phase interpolation techniques for voltage-controlled delay line (VCDL) implementation are provided. The techniques of the invention may employ a second-order phase interpolation topology to improve tuning range performance of the VCDL over process and temperature variation. In one aspect of the invention, the technique may use a complementary input signal to set an absolute 180-degree phase reference. As a result, the maximum tuning range of 180 degrees can be achieved regardless of internal delay variation.